

FORM PTO-1390 (REV. 01-2003) US DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER 125413
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/549,510
INTERNATIONAL APPLICATION NO. PCT/JP2004/004432	INTERNATIONAL FILING DATE March 29, 2004	PRIORITY DATE CLAIMED March 28, 2003
TITLE OF INVENTION T-TYPE CALCIUM CHANNEL BLOCKER		
APPLICANTS FOR DO/EO/US Yukinori MASUDA; Taiji FURUKAWA		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> 1. <input type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input checked="" type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. 3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input type="checkbox"/> The US has been elected (Article 31). 5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4). c. <input type="checkbox"/> The International Application was filed in English. 7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). 		
Items 11 to 20 below concern document(s) or information included:		
<ol style="list-style-type: none"> 11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input type="checkbox"/> A preliminary amendment. 14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. 15. <input type="checkbox"/> A substitute specification. 16. <input type="checkbox"/> A power of attorney and/or change of address letter. 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825. 18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 20. <input type="checkbox"/> Other items or information: 		

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5) 10/549,510	INTERNATIONAL APPLICATION NO. PCT/JP2004/004432	ATTORNEY'S DOCKET NUMBER 125413		
21. <input type="checkbox"/> The following fees are submitted:		CALCULATIONS PTO USE ONLY		
BASIC NATIONAL FEE (37 CFR 1.492(a)): \$ 300.00		\$		
SEARCH FEE (37 CFR 1.492(b)(1)-(3)):		\$		
International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national stage \$ 0.00				
International search fee (37 CFR 1.445(a)(2)) paid to USPTO as ISA..... \$ 100.00				
International search report provided to USPTO no later than the time at which the search fee is paid \$ 400.00				
All situations not provided for above \$ 500.00				
EXAMINATION FEE (37 CFR 1.492(c)(1)-(2)):		\$		
International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national stage \$ 0.00				
All situations not provided for above \$ 200.00				
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).		\$		
TOTAL PAGES OF APPLICATION OVER 100 (- 100)	÷ 50	= †	x 250 =	\$
round up to next integer				
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$
TOTAL CLAIMS	- 20	=	x 50.00 =	\$
INDEPENDENT CLAIMS	- 3	=	x 200.00 =	\$
MULTIPLE DEPENDENT CLAIM(S)(if applicable)			+ 360.00 =	\$
TOTAL OF ABOVE CALCULATIONS =				\$
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by $\frac{1}{2}$.				
SUBTOTAL =				\$
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				
TOTAL NATIONAL FEE =				\$
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				
TOTAL FEES ENCLOSED =				\$
				Amount to be refunded: \$
				charged: \$
a. <input type="checkbox"/> Check No. _____ in the amount of \$_____ to cover the above fees is enclosed.				
b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.				
c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>15-0461</u> . A duplicate copy of this sheet is enclosed.				
d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.				
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.				
SEND ALL CORRESPONDENCE TO: OLIFF & BERRIDGE, PLC Customer Number: 25944				
NAME: James A. Oliff REGISTRATION NUMBER: 27,075				
NAME: Jesse O. Collier REGISTRATION NUMBER: 53,839				
Date <u>December 20, 2005</u>				

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yukinori MASUDA et al.

Application No.: 10/549,510

Filed: September 20, 2005

Docket No.: 125413

For: T-TYPE CALCIUM CHANNEL BLOCKER

INFORMATION DISCLOSURE STATEMENT

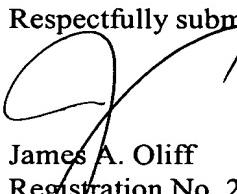
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- 2. Relevance of references 2-8 and 11-20 is discussed in the present specification.
- 3. References 10-11 were cited in the International Search Report. An English language version of the International Search Report is attached for the Examiner's information.
- 4. In accordance with 37 CFR §1.98(a)(2)(ii), copies of any U.S. patents and patent application publications are not attached.
- 5. English language Abstracts of the non-English language references are attached hereto.
- 6. Reference 9 corresponds to JP-A-05-194393, which is cited on the International Search Report; a copy of the Japanese language reference is not attached.

Respectfully submitted,


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Registration No. 27,075

Jesse O. Collier
Registration No. 53,839

JAO:JOC/nxy

Date: December 20, 2005

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DEPOSIT ACCOUNT USE
AUTHORIZATION
Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 125413	APPLICATION NO. 10/549,510		
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANTS Yukinori MASUDA et al.				
		FILING DATE September 20, 2005		GROUP		
		U.S. PATENT DOCUMENTS				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	1.	4,885,284	12/05/1989	Kiyotomo SETO et al.		
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
	2.	JP-A-61-030591 w/ abst.	02/12/1986	JAPAN		
	3.	JP-A-60-069089 w/ abst.	04/19/1985	JAPAN		
	4.	JP-A-01-275591 w/ abst.	11/06/1989	JAPAN		
	5.	JP-A-61-063688 w/ abst.	04/01/1986	JAPAN		
	6.	JP-A-63-233992 w/ abst.	09/29/1988	JAPAN		
	7.	JP-A-62-169795 w/ abst.	07/25/1987	JAPAN		
	8.	JP-A-62-169796 w/ abst.	07/25/1987	JAPAN		
	9.	EP 0 500 426 A1	08/26/1992	EUROPEAN PATENT OFFICE		
	10.	WO 01/04124 A1	01/18/2001	WIPO		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
	11.	Haruko MASUMIYA et al.; "Effects of Ca ²⁺ channel antagonists on sinus node: Prolongation of late phase 4 depolarization by efonidipine"; <i>European Journal of Pharmacology</i> ; Vol. 335; 1997; pp. 15-21.				
	12.	Paul MULDER et al.; "Increased Survival After Long-Term Treatment with Mibepradil, a Selective T-Channel Calcium Antagonist, in Heart Failure"; <i>JACC</i> ; Vol. 29, No. 2; February 1997; pp. 416-421.				
	13.	Johanne VILLAME et al.; "Effects of Mibepradil, a T- and L-Type Calcium Channel Blocker, on Cardiac Remodeling in the UM-X7.1 Cardiomyopathic Hamster"; <i>Cardiovascular Drugs and Therapy</i> ; Vol. 15; 2001; pp. 41-48.				
	14.	Samir FAREH et al.; "The T-Type Ca ²⁺ Channel Blocker Mibepradil Prevents the Development of a Substrate for Atrial Fibrillation by Tachycardia-Induced Atrial Remodeling in Dogs"; <i>Circulation</i> ; Vol. 100; November 23, 1999; pp. 2191-2197.				
EXAMINER				DATE CONSIDERED		
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 125413		APPLICATION NO. 10/549,510	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANTS Yukinori MASUDA et al.				
		FILING DATE September 20, 2005		GROUP		
		U.S. PATENT DOCUMENTS				
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
	15.	Georg NOLL et al.; "Comparative Pharmacological Properties among Calcium Channel Blockers: T-Channel versus L-Channel Blockade"; <i>Cardiology</i> ; Vol. 89; Supp. 1; 1998; pp. 10-15.				
	16.	Chris BAYLIS et al.; "Comparison of L-Type and Mixed L- and T-Type Calcium Channel Blockers on Kidney Injury Caused by Deoxycorticosterone-Salt Hypertension in Rats"; <i>American Journal of Kidney Diseases</i> ; Vol. 38, No. 6; 2001; pp. 1292-1297.				
	17.	D. BILICI et al.; "Protective Effect of T-Type Calcium Channel Blocker in Histamine-Induced Paw Inflammation in Rat"; <i>Pharmacological Research</i> ; Vol. 44, No. 6; 2001; pp. 527-531.				
	18.	Sebastien LENGLET et al.; "Activation of 5-HT ₇ Receptor in Rat Glomerulosa Cells is Associated with an Increase in Adenylyl Cyclase Activity and Calcium Influx through T-Type Calcium Channels"; <i>Endocrinology</i> ; Vol. 143, No. 5; pp. 1748-1760.				
	19.	J. Bruce MCCALLUM et al.; "Loss of T-type Calcium Current in Sensory Neurons of Rats with Neuropathic Pain"; <i>Anesthesiology</i> ; Vol. 98, No. 1; 2003; pp. 209-216.				
	20.	Darrell M. PORCELLO et al.; "Actions of U-92032, a T-Type CA ²⁺ Channel Antagonist, Support a Functional Linkage Between <i>I_T</i> and Slow Intrathalamic Rhythms"; <i>Journal of Neurophysiology</i> ; Vol. 89; January 2003; pp. 177-185.				
EXAMINER					DATE CONSIDERED	
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						